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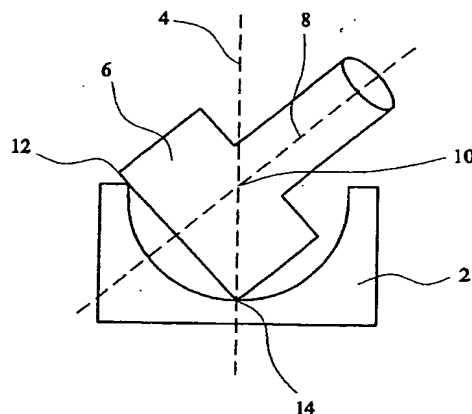
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(54) Title: MANUFACTURING A COMPONENT WITH A NEAR SPHERICAL SURFACE



(57) **Abstract:** A method of making a component (2) of an orthopaedic joint prosthesis, which has a bearing surface whose shape corresponds approximately to a part of a sphere and is symmetrical about its polar axis, involves use of a cutting tool (6) which has a circular cutting edge (12) and which can be rotated about an axis (8) which is perpendicular to the plane containing the said cutting edge (12). The method involves (a) rotating the component about its polar axis (4) and rotating the cutting tool (6) about its axis (8), with the cutting edge (12) of the cutting tool (6) in contact with the surface of the component (2); (b) moving the cutting tool (i) in a direction parallel to the polar axis (4) of the component (2) while leaving the angle between the axis of the cutting tool (6) and the polar axis of the component (2) unchanged, and (ii) along its axis (8); and (c) repeating step (a). The movements (i) and (ii) of the cutting tool (6) cause the radius of curvature of the bearing surface to change continuously and monotonically as the angle between the radius and the polar axis of the component changes, so that the shape of the bearing surface deviates from that of a true sphere in such a way that discontinuities in the shape of the bearing surface as a result of individual movements are minimised.

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